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AUTHOR Tsien, Ay-Ling: Ostman, Ronald E.
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ABSTRACT

A trend analysis was conducted to determine the characteristics of news articles, editorials, and advertisements about tobacco that appeared in the magazines "Newsweek," "Time," and "U. S. News and World Report." Nine time periods in three intervals were studied: 1959-1961-1963, 1965-1967-1969, and 1973-1975-1977. An examination of two issues of each newsmagazine per year yielded a total of 34 tobacco news articles, 66 tobacco editorials, and 203 tobacco advertisements. Data indicated that after the 1971 ban on tobacco advertising in broadcasting, the number of tobacco advertisements in newsmagazines increased while the number of tobacco news articles and editorials on health problems decreased. As health organizations and federal health agencies expressed concern about the adverse effects of smoking after the United States Surgeon General's report on smoking was released in 1964, an increasing number of smoking-health news articles and editorials appeared in newsmagazines. Unexpectedly, substantive comments on the smoking-health issue and procedural matters on tobacco business increased simultaneously. But this increased procedural content resulted from the tobacco industry's efforts to counteract negative remarks about smoking. The findings suggest that, if these patterns persist, a critical imbalance in smoking-health messages will occur, creating a "protobacco" perspective. (Author/RL)

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The Smoking Habits of Three U. S. Newsmagazines: Surgeon General Be Damned?

Ay-Ling Tsien[1/] and Ronald E. Ostman[2/]

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1/ Ay-Ling Tsien is studying for her Ph.D. at Michigan State University. She received her M. A. in 1979 from the School of Journalism at Southern Illinois University, where she studied the topic condensed in this report. Ms. Tsien received her bachelor of arts degree from National Cheng-Chi University in 1977.

2/ Ronald E. Ostman was advisor to the thesis summarized in part in this report. Thanks are extended to Professor L. Erwin Atwood and Dr. Gordon W. White, who also served on Ms. Tsien's Committee and who made valuable suggestions. Dr. Ostman is Assistant Professor of Communication Arts at Cornell University, Ithaca, New York.

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Abstract

The Smoking Habits of Three U. S. Newsmagazines:
Surgeon General Be Damned?

This study is a trend analysis of the characteristics of tobacco news articles and editorials and tobacco advertisements in Newsweek, Time and U. S. News and World Report. Nine periods of the three newsmagazines were studied: 1959, 1961, 1963 (the first time interval), 1965, 1967, 1969 (the second time interval) and 1973, 1975 and 1977 (the third time interval). Tobacco ads were taken from a random sample of two issues of each newsmagazine per year. There were 203 tobacco ads in the 54 issues sampled. All the tobacco news articles and editorials in the three newsmagazines in the nine years were studied. There were 34 tobacco news articles and 66 tobacco editorials. One objective was to find out the relationship between the coverage of tobacco news articles and editorials and tobacco advertisements. Data indicate that when the number of tobacco advertisements increased after the 1971 tobacco advertisement broadcast ban, the number of tobacco news articles and editorials on health problems decreased. Data also suggest that news coverage and the significant events and happenings in society were related. As the health and federal organizations expressed concern about the adverse effects of smoking when the Surgeon General report was released in 1964, an increasing number of smoking-health news articles and editorials appeared in newsmagazines. One finding not expected was that both substantive comments on the smoking-health issue and procedural matters on tobacco business increased simultaneously. But the procedural contents that increased were from the tobacco industry's side of the story to counteract negative remarks on

smoking. If the pattern of tobacco news articles and tobacco advertisements persist in the way data of this study show, there is likely to be a critical imbalance in smoking-health message points of view, tilted toward a "pro-tobacco" perspective.

The Smoking Habits of Three U. S. Newsmagazines: Surgeon General Be Damned?

Brief History of Tobacco Controversy

Humans historically have had a love-hate relationship with various forms of tobacco. The mass media have been used to both praise and scorn the substance.

An advertisement in 1742 for "The Famous Lepbalick and Opthalmick Tobacco" touted the positive health benefits of smoking as follows:

> "Tobacco, which by smoaking a pipe of it, is good for the Head, Eyes, Stomach, Lungs, Rheumatism, and Gout, Thickness of Hearing, Head-ach, Tooth-ach, or Vapours. And to give Free Breath, where a person is almost suffocated with wheesing. Which makes this a most Excellent, and Valuable TOBACCO to smoak for the Head-ach, Tooth-ach, Thickness of Hearing, Vapours, and Dizziness in the Head, and Sore, or weak EYES. And to restore antient Sight, and preserve Young Eyes. So that by using this Tobacco, Persons may never come to wear Spectacles: And if they have already used them, may leave them off, by its so strengthening, and clearing the SIGHT. Likewise to bring away Phlegm, Rheum, and Foul Humours from the Breast, Stomach, and Lungs, for Coughs, asthmas, and such terrible wheesings, that Persons can hardly fetch their Breath. This Fine Tobacco is to be had only up one pair of stairs, at the sign of the Anodyne Necklace, against Devereux-Court, without Temple-Bar; at Mr. Bradshaw's, at the Golden Key behind the Royal Exchange; and at Mess. Peter and Abraham Brown's, in Bristol, Price 4 ^{8} a Pound, or any LESS Quantity, proportionately down to three pence, the ounce" (Lehman Brothers, 1955, p 12).

On the other hand, the Rev. Benjamin I. Lane in 1851 called tobacco a "dirty weed ... poisonous and offensive" (pp 12-13), while James C. Jackson, M. D. in 1865 said tobacco was "one of the most powerful poisons known to man" (p 4). Another physician, Henry Gibbons, M. D. wrote an essay in 1868 entitled Tobacco and Its Effects: A Prize Essay Showing That the Use of Tobacco is a Physical, Mental, Moral, and Social Evil. Gibbons exhorted people everywhere to "imbue the entire rising generation with hostility against tobacco. ... We must baptize their tender hearts with abhorrence of the vicious habit" (p 48). John Lizars in 1883 linked "smoke, snuff, or quid" with syphilitic virus (p 137), while in the same year Abiel Abbot Livermore chastized tobacco, saying it was "a poison, ... a needless expense," (which leads) "directly to drinking spirituous liquors, ... an indignity to the female sex, and an outrage upon the common laws and usages of politeness, ... an enslaving habit, ... a perversion of the gifts of God, and turns his blessings into curses," and led to "deterioration to the successive generations of the human race" (pp 24-30).

Advertising and promotion of tobacco continued in earnest after the Civil War, partially in reaction to the virulent attack on tobacco in the 1850s and early 1860s. The Lehman Brothers chronicle the advertising and promotion of the era this way:

> "Promotion was, indeed, one of the important keys to tobacco business in the entire post-Civil War period. Members of the tobacco industry competed violently against each other with all the free-swinging showmanship of that great era. The cigar-store Indian blossomed throughout the land; retailers were wooed by manufacturers with gifts of stepladders, pails and the like for selling specified amounts of the maker's brand; consumers saved tin tags stuck on

plug tobacco and turned them in for pocket-knives and imitation diamond stickpins. Pictures of actresses, colored sheets of costumes of foreign lands, silk flags all became prizes for the diligent saving coupons. Cigar "drummers" made the rounds of tobacco stores, extravagantly dressed in silk toppers and frock coats, and harangued the owner and the customers, helped dress the windows, and handed out samples, with florid oratory and grandiloquent gestures" (pp 25-26).

A popular promotional theme contained in the cigarette advertisements after World War I was that cigarettes were a therapeutic and a relieving agent. For example, the advertisements claimed that "Camels aid digestion." Ochsner (1954) said that tobacco ads urged consumers to:

" ... Smoke to aid digestion "during, after and between meals," smoke for a lift because it "picks up, perks up, renews and restores your energy," smoke for vim and vigor, as athletes, famous champions and other sports winners do, smoke "to comfort your nerves." The "lift" you get is a release of your own natural energy -- your latent energy made easily and harmlessly available" (p 29).

However, in 1921, Bernarr MacFadden brought the vilification of tobacco to new heights, branding it "indispensible to the gangster" and noting that "in its fumes the poet finds strange themes; behind its film cloud the prostitute hides herself" (p vii). Tobacco was the topic of cynical satire in J. W. Irwin's fictional rendition of Nicotine On The Air: A Brief Broadcast over Station T-Y-P-E in 1938. There was no lack of critics of tobacco in the early twentieth century.

But at the same time that foes of tobacco were pounding their book and pamphlet pulpits, different media were carrying friendly, positive, and persuasive messages to the public. Americans were told by a tough, macho personality "I'll tell the world they satisfy" (Chesterfields). "Not a cough in a carload" promised Old Gold. "Call for Philip Morris" told readers to change to Philip Morris because "it's good judgment." Lucky Strike told readers of its ads that Metropolitan Opera tenor Lauritz Melchior, who "Sings 1,790 Words A Night" found Luckies "gentle on his throat ... even under this strain."

Then the foes of tobacco began to abandon the moralistic nature of their attacks and started to amass scientific data to support their point of view. As early as 1942, Reader's Digest published a report of the magazine's own independent testing of cigarettes as compared to the statistics and health claims in cigarette advertisements. The report indicated that the advertisements were less than truthful and that cigarettes contained many properties that could be quite detrimental to health.

The Reader's Digest attack seemed short lived and unsuccessful. Cigarette advertisements continued to make claims on the health aspect, and increased appeals concerning the pleasure of smoking by 1950 (Business Week, 1954).

This favorable image of smoking, spurred by cigarette advertising, was somewhat tarnished in 1953 when newspaper publicized a report given at a dental society meeting in New York City, associating cigarette smoking with lung cancer (Fritschler, 1975).

Then, in 1954, the American Cancer Society published a study of the "fatal smoking habits of Americans," which was estimated to have a catastrophic effect on cigarette consumption (Ochsner, 1954). In the same

year, Drs. E. Cuyler Hammond and Daniel Horn conducted studies of smoking in laboratories and in hospitals, and concluded firmly that smoking causes lung cancer. They also revealed that the death rate from all causes for male smokers between the ages of 45 and 64 was twice as high as that for nonsmokers (Hammond and Horn, 1954).

After the results of the 1954 studies were announced, the tobacco companies reacted by challenging the research findings. A Tobacco Industry Research Committee (TIRC), later called the Council for Tobacco Research, was set up. It supported research to produce counter-evidence to unfavorable findings on smoking, and attempted to save the tobacco industry from any governmental action that might interfere with sales. Whenever there was scientific evidence presented against smoking, the industry responded by more research or more public relations expenditures (Fritschler, 1975). The Lehman Brothers wrote in 1955 that the pro-tobacco forces were winning the battle for public opinion. As they put it, " ... the cigarette habit ... grew like fresh dough in a hot oven" (p 40).

In 1957, the American Cancer Society, the National Cancer Institute, the American Heart Association and the National Heart Institute issued results from an investigation by seven scientists, claiming a casual relationship between cigarette smoking and lung cancer:

> "The sum total of scientific evidence establishes beyond reasonable doubt that cigarette smoking is a causative factor in the rapidly increasing incidence of human epidermoid carcinoma of the lung. The evidence of a cause-effect relationship is adequate for the initiation of public health measures" (Fritschler, 1975, p 19).

The Legal and Monetary Affairs Subcommittee of the Government Operations Committee, chaired by John A. Blatnik (D. -MN.) found in 1957 that filter-tipped cigarettes were not as safe as cigarette manufacturers claimed. The Subcommittee reported that:

> "The cigarette manufacturers have deceived the American public through their advertising of cigarettes" (Congressional Quarterly Weekly Report, 1968, p 914).

In 1964, the Public Health Service issued the report of an advisory committee to the surgeon general, Smoking and Health. This report linked cigarette smoking with lung cancer, chronic bronchitis, emphysema, cardiovascular diseases and a lengthy catalogue of maladies. Unanimously, the U. S. Public Health Service and the Department of Health, Education and Welfare had brought steadily stronger evidence of health hazards to cigarette consumers (Time, 1969, p 85). This study was based on examination of the death rates among 1,123,000 persons. (U. S. Department of Health, Education and Welfare, 1964, p 28). After the report was issued, cigarette sales dipped sharply. It is estimated that the decrease was from seven to 10%. Encyclopaedia Britannica Book of the Year reported, however, that two months after the release of the report "consumption had apparently returned to 'normal' level" (p 538). In the face of the brief sales decline, the tobacco industry set up another organization, called the Cigarette Advertising Code, Inc., which attempted to assure fairness and accuracy in competitive advertising (Fritschler, 1975).

With the resulting increase in the smoking health controversies, the Federal Trade Commission (FTC), in midsummer, 1964, became more actively concerned with cigarette advertising. It subsequently ordered that a health warning be included on the side panel of cigarette packages,

reading: "Caution: Cigarette Smoking May Be Hazardous To Your Health" (Friedman, 1975; Time, 1969). Congress in July, 1965, passed the FTC-proposed Cigarette Labelling Act. The same act, however, prevented the FTC from further restricting cigarette advertising for four years - until July 1, 1969 (U. S. News & World Report, 1969). On May 28, 1969, the House Commerce Committee recommended reenactment of the 1965 Act to bear on cigarette packages the statement: "Warning: The Surgeon General Has Determined That Cigarette Smoking Is Dangerous To Your Health And May Cause Lung Cancer Or Other Disease." The House bill was approved on June 18, 1969 (U. S. News & World Report, 1969). The cautionary label was further modified on April 1, 1970. It finally read: "Warning: The Surgeon General Has Determined That Cigarettes Smoking Is Dangerous To Your Health" (Wagner, 1971).

Previously, in June, 1967, the Federal Communications Commission (FCC) had ruled that the Fairness Doctrine required television and radio stations to provide free time for anti-smoking commercials, roughly one anti-smoking commercial to offset every three cigarette advertisements (Wagner, 1971). The evidence against cigarette smoking, meanwhile, continued to increase. A 1967 survey of the Public Health Service found:

> Smokers suffer 19% more "lost workdays," 10% more days "requiring bed rest," 13% more days of "restricted activity" because of illness than do nonsmokers (Olshavsky, 1977, p 44).

On November 22, 1967, the FTC released tar and nicotine content of 59 brands as determined in their new testing laboratory (Fritschler, 1975). But the FCC found in March, 1968, that sales had declined only slightly from 572.6 billion cigarettes in 1967 to 571.7 billion in 1968. It therefore ordered a ban on all the cigarette commercials from the air-

waves. The ban was sanctioned by Congress and went into effect (Wagner, 1971). It read as follows:

> After January 1, 1971, it shall be unlawful to advertise cigarettes on any medium of electronic communication subject to the Federal Communications Commission (Londer, 1973, p 3).

Despite all the crusades against the tobacco business, the yearly overall cigarette profits seemed to stablize (Time, 1969). In fact, tobacco companies still enjoyed high domestic cigarette sales in 1971 while saving money on advertising. They took $215 million from the broadcast blackout of cigarette commercials and spent $160 million on a less expensive form of advertising - the printed media (Londer, 1973).

According to Smith (1978, p 29), magazines among the printed media have enjoyed "huge increases in revenue from cigarette advertisements" after cigarette advertising was banned from radio and television. Feinberg (1971) did a content analysis on cigarette advertising in magazines. Thirteen of the 14 sample magazines carried more cigarette advertisements and devoted more space to cigarette advertising in the first quarter of 1971 than in the first quarter of 1970. The average increase was twofold, with 10 of the 14 periodicals publishing considerably more than twice as much.

The Statistical Abstract of the United States delineated the following figures (see Table 1) on tobacco advertising revenues of general magazines (U. S. Department of Commerce Bureau of Census, 1960-1978). In 1977,

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Table 1 about here

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it can be seen that tobacco advertising expenditures in magazines had in-

creased more than 600% over 1959. No doubt, the inflation of dollars year by year might bring about the increase, and there was a slight drop of advertising dollars in 1967 compared to 1965, but the upward trend was dramatic since 1971 in the third time interval.

Smith (1978, p 19) remarked that "magazines that have accepted growing amounts of cigarette advertising have failed to cover tobacco's threat to health (in news and editorials)." This is despite the steady stream of tobacco-health related news stories which have been reported in various news media, or as Newsweek (1978) noted:

> "For the tobacco industry, the past two decades have brought an unbroken procession of disastrous medical news: it was almost routine ... when the industry's own fourteen-year, $15 million research study once again linked cigarettes with problems ranging from heart diseases to ulcers" (p 76).

In his survey of tobacco advertising and tobacco news articles and editorials in magazines from 1970 to 1976, Smith (1978) found:

> "The records of national magazines that accept cigarette advertising can only be called dismal. A few have published how-to-quit articles from time to time (itself an admirable thing to do, to be sure), although even those are comparatively rare. But anyone who depended on those magazines for reporting on the subject of cigarettes as a major public-health problem would have found nothing at all in many magazines, and only glancing references in others, primarily the newsmagazines" (p 30).

Since many mass media in the second half of the nineteenth century and the twentieth century depend on advertising for a great part of their revenues and since advertising makes possible low-priced large circulation,

there have been many arguments about whether or not advertising presents pressures on editorial content (Davison, Boylan and Yu, 1977; Dennis, 1978; McGarry, 160; Merrill and Lowenstein, 1971; Peterson, 1964; Sandage and Fryburger, 1967; Sandman, Rubin and Sachsman, 1972; Smith, 1978; Walton, 1963). There has been little agreement as to whether the news stories and editorials that may embarrass an advertiser will be downplayed or whether they are shaped so as to be in harmony with the interests of advertisers.

In the case of tobacco advertising, Smith (1978) concluded that cigarette advertising revenues can silence magazine editors. Rosten (1963) on the other hand, believed that professional interest overrode economic interest:

> "Tobacco companies represent one of the largest and most consistent sources of national advertising revenue. Yet within an hour after medical reports appeared linking cigarette smoking to lung cancer, they were fully and dramatically presented to the public - not only on the front pages of newspapers but in radio and television reporting as well. The news was simply too big, too "newsworthy" to be suppressed (even though several discussion programs shied away from the subject)" (p 182).

Olshavsky (1977) argued that editors and advertisers adopted a compromise:

> "They (the magazines) carry ads for cigarettes as well as news of their dangers, but in a very special way. They report major news releases from the Surgeon General, public health agencies, research organizations, and governmental agencies but at the same time, they carry reports by the Tobacco Institute and other industry spokesmen to offset these announcements. And articles on the dangers are

often given special treatment - carried without an appropriate headline or buried in a story whose headline suggests some other message" (p 107).

This study is concerned with whether the medical evidences against smoking, especially the 1964 Surgeon General Report, and the subsequent 1971 broadcast commercial ban, made a difference in the trend of three U. S. newsweeklies' coverage of smoking-health controversies in news articles and editorials, and also whether a relationship between tobacco advertising and tobacco news articles and editorials exists in these periodicals.

Dimensions of News and Editorials

Two contrasting approaches employed by Gerbner (1961) to analyze differential bases of communication and press performance were adapted for use.

The first approach, "procedural matters," had to do with actions and the phenomena that resulted from actions, while the second approach, "substantive comments," had to do with critical viewpoints.

For the tobacco news article or editorial, procedural matters dealt with FTC or FCC proposals, congressional actions, the tobacco industry's counter anti-smoking war, cigarette sales, economic jolts in farm employment or in tobacco industry, etc. This dimension focuses on "who," "what," "when," and "where" questions. A communicator dealing with this level was reporting factual aspects of the issue.

Substantive comments were concerned with health issues and negative or positive comments on the relationship between smoking and health. This dimension focused on "how" and "why" questions. A communicator making substantive comments reported in depth on the issues and often took a

personal stand on the issues.

Examples of these approaches were:

Procedural - FCC proposed to ban all cigarette advertising on radio and and television.

- Cigarette commercials were no longer among the first and the biggest bidders for TV time.
- Tobacco lost major force in U. S. economy.
- Tobacco company increased premium coupons and channeled cigarette advertising in other media.

Substantive- Advice on building a new, massive research program that "might lead you to a safer cigarette."

- Tobacco companies' conclusion that "there is no demonstrated causal relationship between smoking and any disease."
- Confirmation of health hazard of cigarette smoking by American Cancer Society.
- Lung cancer, respiratory ailments, coronary heart disease and ulcers are proved to be related to smoking.

As a general rule, procedural matters referred to the actions, regulations and phenomena regarding the tobacco industry while substantive comments referred to the comments on the smoking and health problems. Both procedural and substantive comments could appear in the same news article or editorial.

Hypotheses

The following hypothesis relate to relevant content in Newsweek, Time, and U. S. News & World Report. Both null and alternative hypotheses are discussed.

H_1: Across each of three time intervals, there will be no relationship

between the number of tobacco advertisements and the number of news articles and editorials on smoking and health-related problems and on the tobacco industry. Alternatively, a negative relationship is expected between the number of news articles, editorials and advertisements regarding tobacco.

H_2: There will be no difference in the number of newsmagazine news stories and editorials on smoking-health controversies and on the tobacco industry between three time intervals.

However, the years 1964 and 1971 are hypothesized as two pivotal years for news stories and advertising respectively, and are expected to influence the magazines' coverage.

Shortly after the 1964 Surgeon General's report, it is expected more news articles and research on the hazards of smoking will appear in the newsmagazines.

H_3: There will be no difference in the number of tobacco advertisements in newsmagazines in the three time intervals.

Since the broadcast ban went into effect in 1971, it is expected that there will be a substantial increase in the number of advertisements in the period following 1971 (third time interval), compared to the first and second time intervals.

H_4: There will be no difference in news articles and editorials on the stress given to substantive comments regarding health issues and on the negative relationship between smoking and health between the three time intervals.

H_5: There will be no difference in news articles and editorial coverage on procedural matters concerning the actions, regulations or phenomena regarding the tobacco industry between the three time intervals.

It is expected that newsmagazines will direct more attention to news and editorials regarding smoking and health problems shortly after 1964 while putting more emphasis on news and editorials on procedural matters relating to tobacco in the periods before 1964 and after 1971.

Research Methodology

Sampling

The magazine population under study was issues and contents of Time, Newsweek and U. S. News and World Report. The three newsmagazines were chosen for two reasons. One is that they were among the magazines of top circulation that contain both tobacco advertisements, news articles and editorials on the tobacco industry, cigarette consumption and health (Audit Bureau of Circulations, 1978). The other reason is that these newsmagazines have been noted to be of special importance in the smoking-health controversy:

> "The most curious performances of all are those of the two major newsmagazines, Time and Newsweek. (U. S. News and World Report has been interested in only one aspect of the tobacco story: cigarette sales.) While both have reported the individual new pieces of evidence of the ill effects of cigarette smoking on health, neither magazine, in the seven-year period, has published anything resembling a comprehensive account of the subject. (Both magazines carry an average of six to eight pages of cigarette advertisements in each issue.)" (Smith, 1978, p 30).

Nine annual periods of the newsmagazines were studied: 1959, 1961, 1963, 1965, 1967, 1969, 1973, 1975 and 1977. These were grouped into three time intervals: pre-1964; 1965-1969; post-1971. A simple random sample of two issues per year was taken from the three newsmagazines in

the nine periods. All the tobacco advertisements, including cigarettes, cigars, pipe tobacco, snuff and chewing tobacco in each of the 54 issues sampled were counted and content analyzed. Cigarette advertisements accounted for the greatest percentage of tobacco advertisements and were a major concern in the analysis.

There was no sampling for the tobacco-health related news and editorials in the three newsmagazines in the nine periods. A population was studied, because there were many more tobacco advertisements in newsmagazines than tobacco-health related news and editorials. An index of subject matter by year from the Readers' Guide to Periodical Literature (1959-1977) was used to determine the population. The subject matter was found under the headings of tobacco, cigarettes, filter, nicotine, tar, medicine, cancer and health organizations.

Recording and Context Unit and Statistical Test

For the advertisements, the recording and context unit was the entire message from pictures and words, if any. For the news and editorials, it was the entire article plus photos, if any.

The trend data were tested for statistical significance. The level of significance to reject the null hypothesis was set at .05.

Reliability and Validity Estimate

Reliability generally refers to the level of agreement in repeated measures with the same instrument on a given sample of content. To check the stability and consistency of the measurements, data were coded and recoded by an individual coder. After the first coding was done, four randomly selected advertisements among the first coded were recoded two weeks later, independent of the first ("blind" coding). The intracoder reliability was calculated with a composite reliability coefficient,

based on Holsti's (1969) formula. The composite reliability coefficient, .98, is very high. The coding judgments made are considered reliable.

Validity refers to the extent to which an instrument is measuring what it is intended to measure. The categories and content units were specific and concrete. Smith's (1978) survey, which was somewhat impressionistic, placed little theoretical burden on the data, but provided an insight into the research problems. Concurrent validity can be checked partly with Feinberg's (1971) study.

Limitations

One disadvantage to the Readers' Guide to Periodical Literature sample is that "there is a de-emphasis on controversial materials" (Showalter, 1978). This disadvantage was remedied by looking closely into the index of every issue of the three newsmagazines in the nine periods and by skimming through the articles in the sections that tobacco news articles and editorials had been found to appear or would likely appear. Six articles relating to tobacco business and the smoking-health issue that were not listed in Readers' Guide were found and were content analyzed.

No attempt should be made to generalize from the findings of this study to other products or other media.

Results

There were altogether 303 tobacco advertisements, news articles and editorials analyzed. Of the 303 items, 203 (67%) were advertisements, 34 (11%) were news articles and 66 (22%) were editorials. Among the 203 tobacco advertisements, there were 175 (86.21%) cigarette ads, 12 (5.91%) cigar ads, seven (3.45%) pipe tobacco ads, and nine (4.43%) snuff, or chewing tobacco ads.

A chi-square test for hypothesis one indicated a value of 76.99, significant at $p<.005$, two-tailed test, with two degrees of freedom (DF). The number of tobacco advertisements did relate to the number of news articles and editorials on the tobacco industry and on smoking and health-related problems. The relationship, summarized by a contingency coefficient, C=45, is moderately strong. With reference to the frequencies and percentages of advertisements and news articles and editorials, there were more news articles and editorials (n=34 or 63%) than there were advertisements (n=20 or 37%) in the first time interval. The number of advertisements and the number of news articles and editorials were about equal in the second time interval, n=54 or 49% and n=55 or 51% respectively. But there were many more advertisements (n=129 or 92%) than there were news articles and editorials (n=11 or 8%) in the third time interval (See Figure 1). The alternative hypothesis one was supported and the null hypothesis was rejected.

Figure 1 about here

The data used to test hypothesis two were in the direction predicted by the alternative hypothesis. There were more tobacco news articles and editorials in the second time interval (n=55 or 62% compared with the first time interval and n=55 or 83% compared with the third) than in either the first (n=34 or 38% compared with the second time interval) or the third time interval (n=11 or 17% compared with the second time interval). The chi-square test between the second and the first time intervals was $X^2 = 4.96$, $p<.025$, one-tailed test, DF=1, and between the second and the third interval was $X^2 = 29.34$, $p<.0005$, one-tailed test, DF=1. Null

hypothesis two was rejected.

The data tested also supported alternative hypothesis three. There were more tobacco advertisements in the third time interval (n=129 or 87% compared with the first time interval and n=129 or 70% compared with the second time interval) than in either the first (n=20 or 13% compared with the third time interval) or the second time interval (n=54 or 30% compared with the third time interval). The respective findings were X^2 = 79.74, $p<.0005$, one-tailed test, DF=1 and X^2 =30.74, $p<.0005$, one-tailed test, DF=1. Null hypothesis three was rejected.

The data testing hypothesis four were in the alternative direction as expected, but were not for alternative hypothesis five. Regarding hypothesis four, there were more substantive comments on health issues and on the negative relationship between smoking and health in the second time interval (n=85 or 60% compared with the first time interval and n=85 or 86% compared with the third) than in either the first (n=56 or 40% compared with the second) or the third time interval (n=14 or 14% compared with the second). (See Figure 2). The findings were X^2 =50.92, $p<.0005$, one-tailed test, DF=1 and X^2 = 50.92, $p<.0005$, one-tailed test, DF=1, respectively. Null hypothesis four was rejected.

Figure 2 about here

For hypothesis five, the results were significant, but opposite of the predicted alternative direction. News articles and editorials covered procedural matters on the actions, regulations or phenomena regarding the tobacco business more in the second time interval (n=29 or 69% compared with the first and n=29 or 81% compared with the third) than in either

the first (n=15 or 31% compared with the second) or the third time interval (n=7 or 19% compared with the second). The statistical tests were, respectively, X^2 =6.1, p<.02, two-tailed test, DF=1, and X^2 =13.44, p<.001, two-tailed test, DF=1. The null hypothesis five was rejected, but the data were opposite of the predicted alternative direction. (See Figure 2).

Conclusions

The data suggest the number of tobacco news articles and editorials and the number of tobacco advertisements carried by newsmagazines were related, and that significant events and happenings in society such as the 1964 Surgeon General report and the 1971 tobacco commercial broadcast ban were reflected in the newsweeklies' treatment of the topic.

While the intention of news articles and editorials are to narrate the current flow of events and to embody the general concern of average citizens, the three newsmagazines studied seem susceptible to the pressures of economic realities. Before 1971, there were more tobacco news articles and editorials than tobacco advertisements. But the three years studied after 1971 contained 57% more tobacco advertisements than did the six years studied before 1971, while the number of tobacco news articles and editorials decreased radically, comparing pre-1971 to post-1971. Eighty-nine percent of the news articles and editorials on the topic occurred during the pre-1971 period examined. The findings are similar to those of Smith (1978) and Feinberg (1971). The growing acceptance of toabcco advertising was related to a decline, not an increase, in the reporting of tobacco news articles and editorials.

However, it could be argued that the decline in news articles and editorials was related to a decrease in newsworthy topics concerning the

issue over time. The number of tobacco news articles and editorials were examined in The New York Times Index, 1959-1977 and in The Wall Street Journal Index, 1959-1977. The number of tobacco news articles and editorials after 1964 went up to more than double the number before 1964, but slid back after 1971 to a little more than what was the "normal" number in the years before 1964. (Figures 3 and 4). The number of news articles and editorials in newsmagazines increased during the first two time intervals (1959-1969), but dropped in the third time period (1973-1977). The number in the third time interval dropped to almost one-third of the pre-1963 number. A direct implication might be that newspapers could get along without tobacco advertising better than could magazines, or at least were less leery of possibly offending tobacco advertisers. A possible explanation might be that the contents of newspapers were made up of a diverse, numerous and often inchoate aggregate. They probably were less "disciplined" (due to a tighter time deadline, perhaps), more discursive and more committed to and dependent upon the daily flow of events. The selection and presentation of information in newsmagazines, on the other hand, probably were governed by a few more carefully selected ideas or themes. The newsmagazine contents were likely to be more "interpretative" and influenced by gatekeepers.

Figures 3 & 4 about here

Tobacco news articles and editorials were, in most instances, put under the sections of "Business and Finance" and "Medicine" in Time and Newsweek, but were always in the "March of the News" section in U. S. News and World Report. The six articles that were not found in the

Readers' Guide to Periodical Literature were under the general headings of "Modern Living," "International," "Customs," "The Nation," "Television," and "Behavior," without headlines of their own. However, no attempts seem to have been made to separate the tobacco news items and editorials from the tobacco advertisements. One can find tobacco advertisements, though not many and mostly black-and-white, placed side by side with tobacco sales or smoking-health articles.

Tobacco news articles and editorials in the second time interval (1965-1969) contained a strong, unequivocal indictment of cigarette smoking. They not only reported statistical and experimental evidence but also pinpointed the process by which smoking exerted its lethal effects. The tendency to report such scientific evidence was not strong before 1964 and was very weak after 1971. It was beyond expectations that while newsmagazines covered more substantive comments on the smoking-health issue in the second time interval, they also covered more procedural matters on tobacco business in that period. It might be that the tobacco industry became more concerned about their business in terms of production, tax, consumption and advertising revenues. They also might have tried to exert an equal voice with health organizations and federal agencies. News articles and editorials were found to cover more advertising and taxation concerns in the second time interval. In the period after 1971, there were procedural articles on the smuggling of cigarettes from low-tax to high-tax states or the so-called "buttleggging," which were not found in the first two time intervals.

It is easy to understand the plight of tobacco industry. The tobacco industry is a multi-billion dollar industry. The business impact of smoking starts from the farm. Sales of leaf tobacco bring farmers a lot

of income. Factories of tobacco companies provide many job opportunties. States and cities get taxes from tobacco sales. As U. S. News and World Report (1965) stated:

"The facts on tobacco and its product - yearly figures:

*Sales to consumers: $7.8 billion

*Exports: $550 million

*Excise tax collections-

Federal: $2.1 billion

State, local: $1.4 billion

*Farm sales of tobacco: $1.4 billion

*Payroll, 79,000 tobacco company employees, $350 million

*Tobacco advertising: $300 million" (p 99).

Even if cigarette output dropped slightly, it would upset the economy. The tobacco-growing areas could switch to other crops, but it would take a long while and might require special federal aid. In the meanwhile, tobacco advertising continues to fit every taste and soothe every fear and the advertising uptrend persists.

After the ban on commercial advertising of cigarettes on the broadcast media, there was a quite natural expectation on the part of proponents of the legislation that smoking would be reduced. Instead, advertisers diverted their ad budgets to print advertising, particularly to magazines, and the net result after less than a decade is that the percentage of adult smokers has actually increased slightly (Teel, Teel & Bearden, 1979). One message seems clear -- legislating advertising restrictions is not a necessary or sufficient condition in affecting the habitual behaviors of millions of Americans. The additional bit of evidence suggested in this paper is that such legislation has had a "negative"

impact on the frequency of news articles and editorials concerning smoking in three major U. S. newsmagazines. A policy implication for those interested in informing and persuading Americans that smoking is harmful to their health is that legislation oftentimes has unexpected effects and that different strategies must be attempted.

At this juncture in American newsmagazines, the pro-tobacco message dominates and in fact may depress news articles and editorials which discuss or stress the negative aspects of tobacco use. And while the American Medical Association passes resolutions deploring tobacco use and praising media which do not accept tobacco advertisements, (Advertising Age, 1979), at least three major newsmagazines on the U. S. scene seem to have preferred hard cash from advertising to warning readers of health hazards resulting from use of the products extolled in their ads.

Table 1. Tobacco Advertising Revenues of General Magazines (Statistical Abstract of the United States).

*Year	Millions of Dollars	Index
1959	27	100
1961	29	107.4
1963	36	133.3
1965	42	155.6
1967	40	148.1
1969	48	177.8
1973	111	411.1
1975	144	533.3
1977	194	718.5

*These specific years were chosen because they fell before, between, and after the two landmark years, 1964 and 1971, which were believed to be critical to smoking-health related stories and to advertising respectively. These nine periods were divided into three intervals: the interval before 1964 (i.e., 1959, 1961 and 1963), the interval between 1964 and 1971 (i.e., 1965, 1967 and 1969), and the interval after 1971 (i.e., 1973, 1975 and 1977).

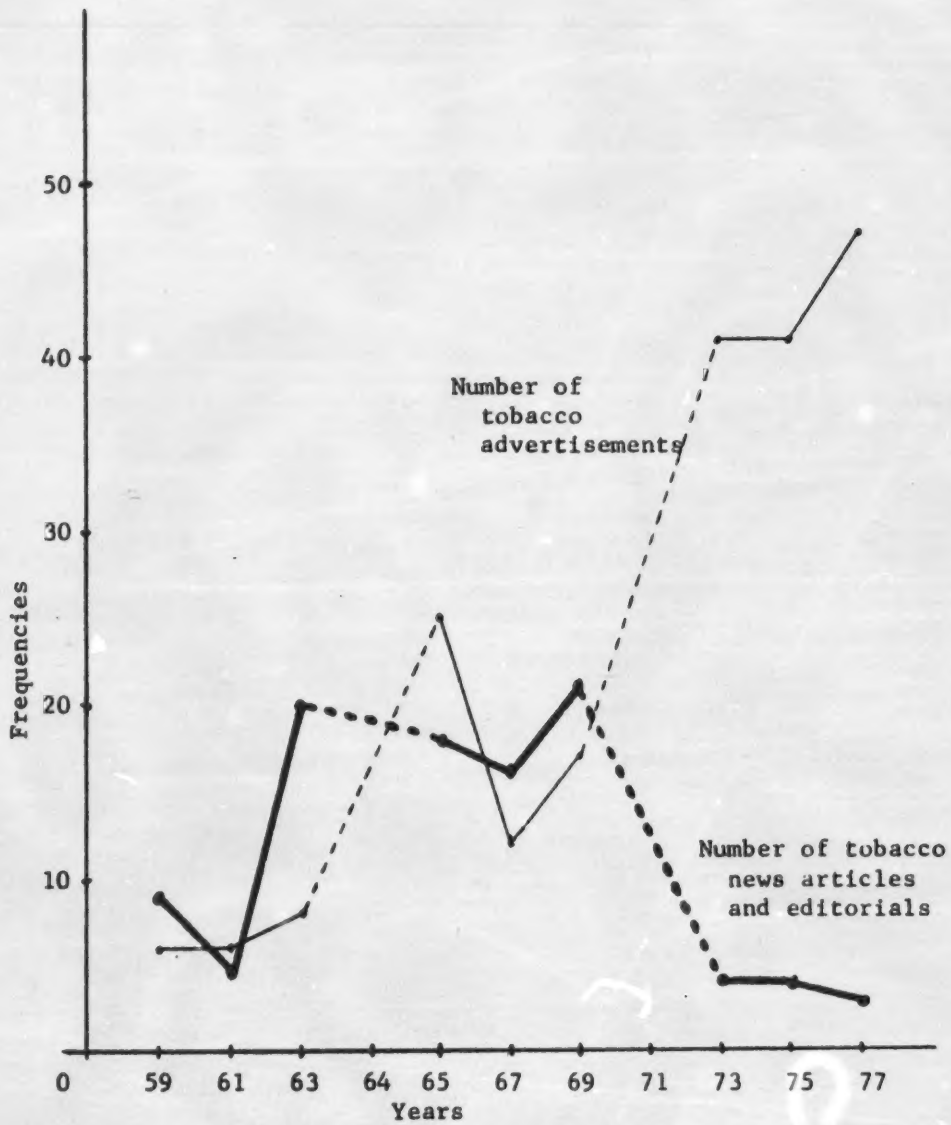

Figure 1. Relationship between the number of tobacco advertisements and the number of tobacco news articles and editorials.
Key: Dotted line=projected line.

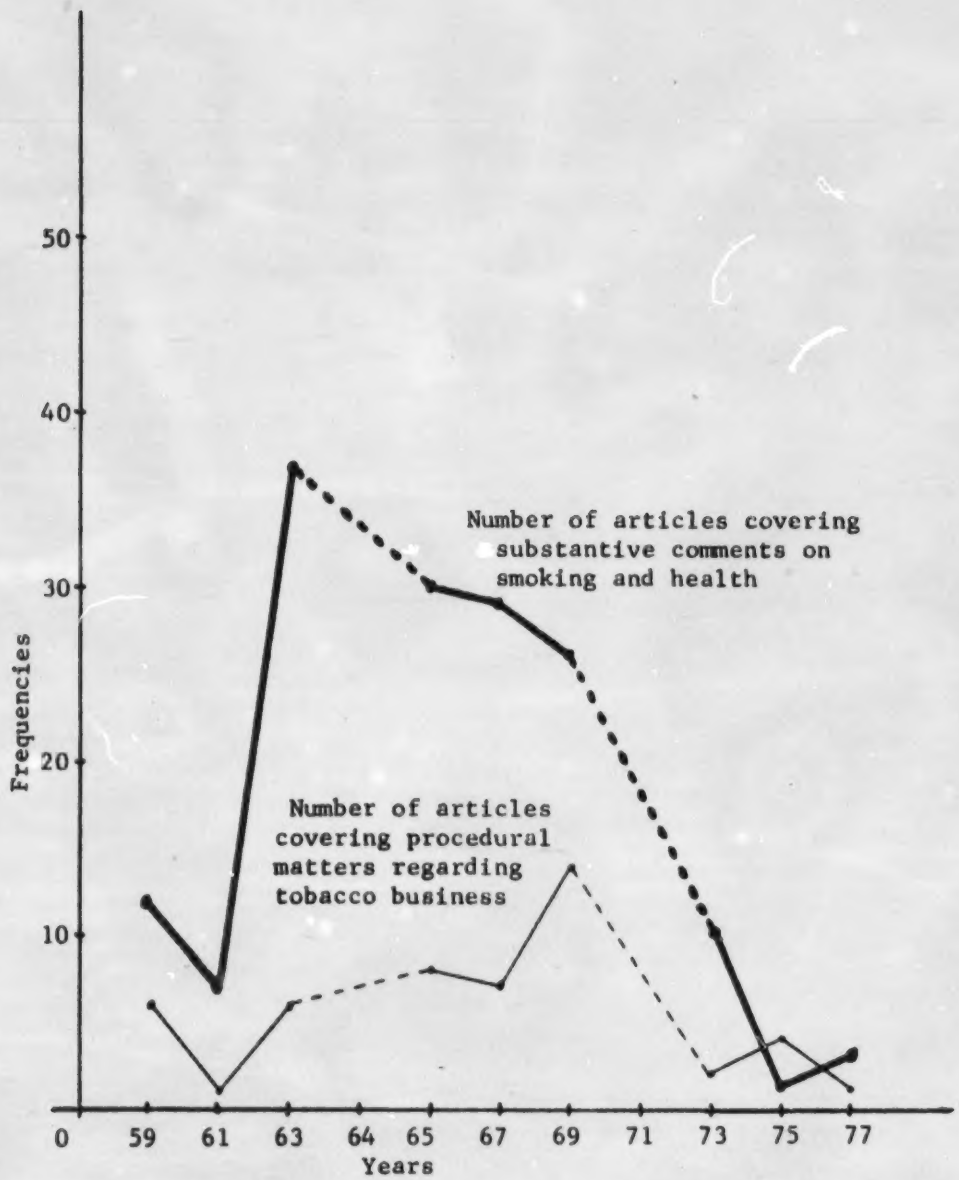

Figure 2. Relationship between the number of articles covering substantive comments on smoking and health and the number of articles covering procedural matters regarding tobacco business.

Key: Dotted line=projected line.

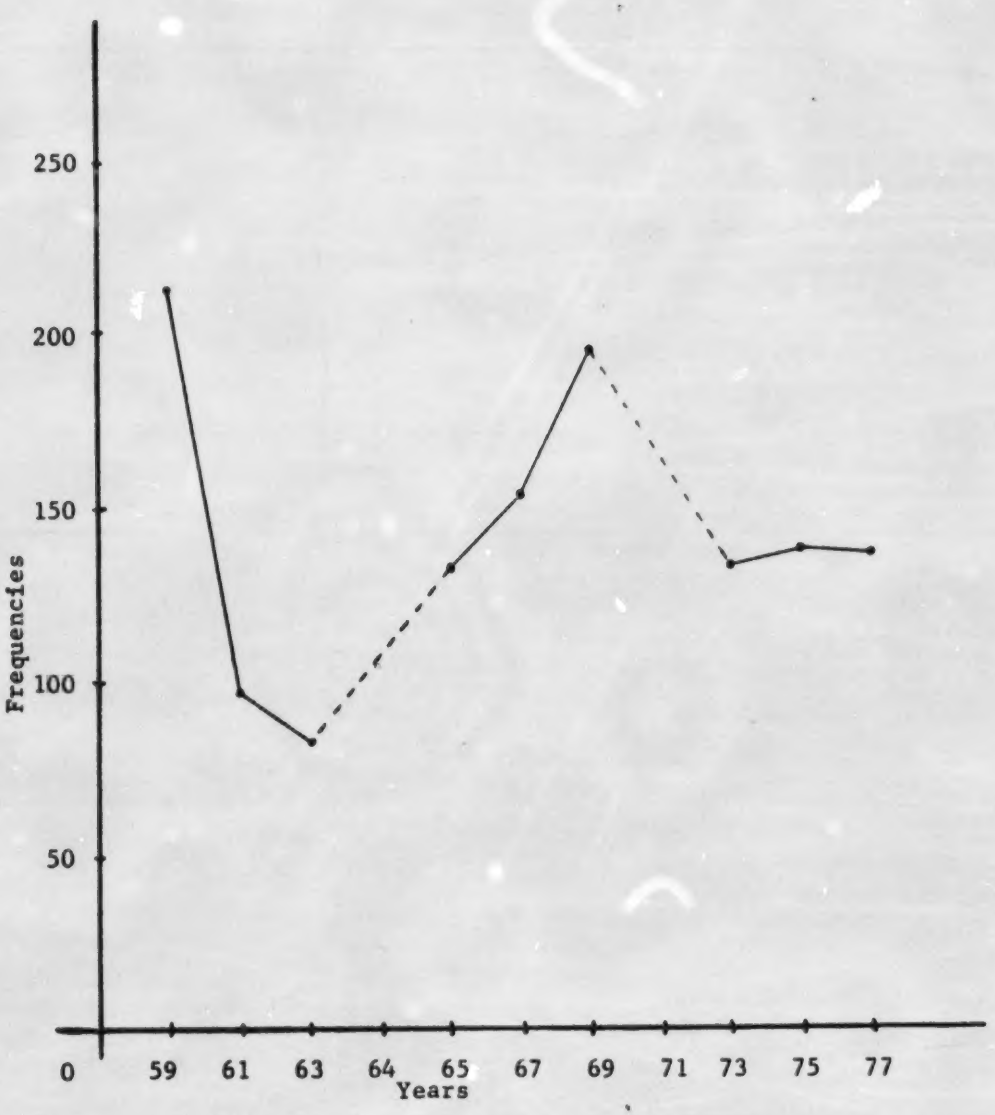

Figure 3. Frequencies of tobacco news articles and editorials from The New York Times Index.
Key: Dotted line=projected line.

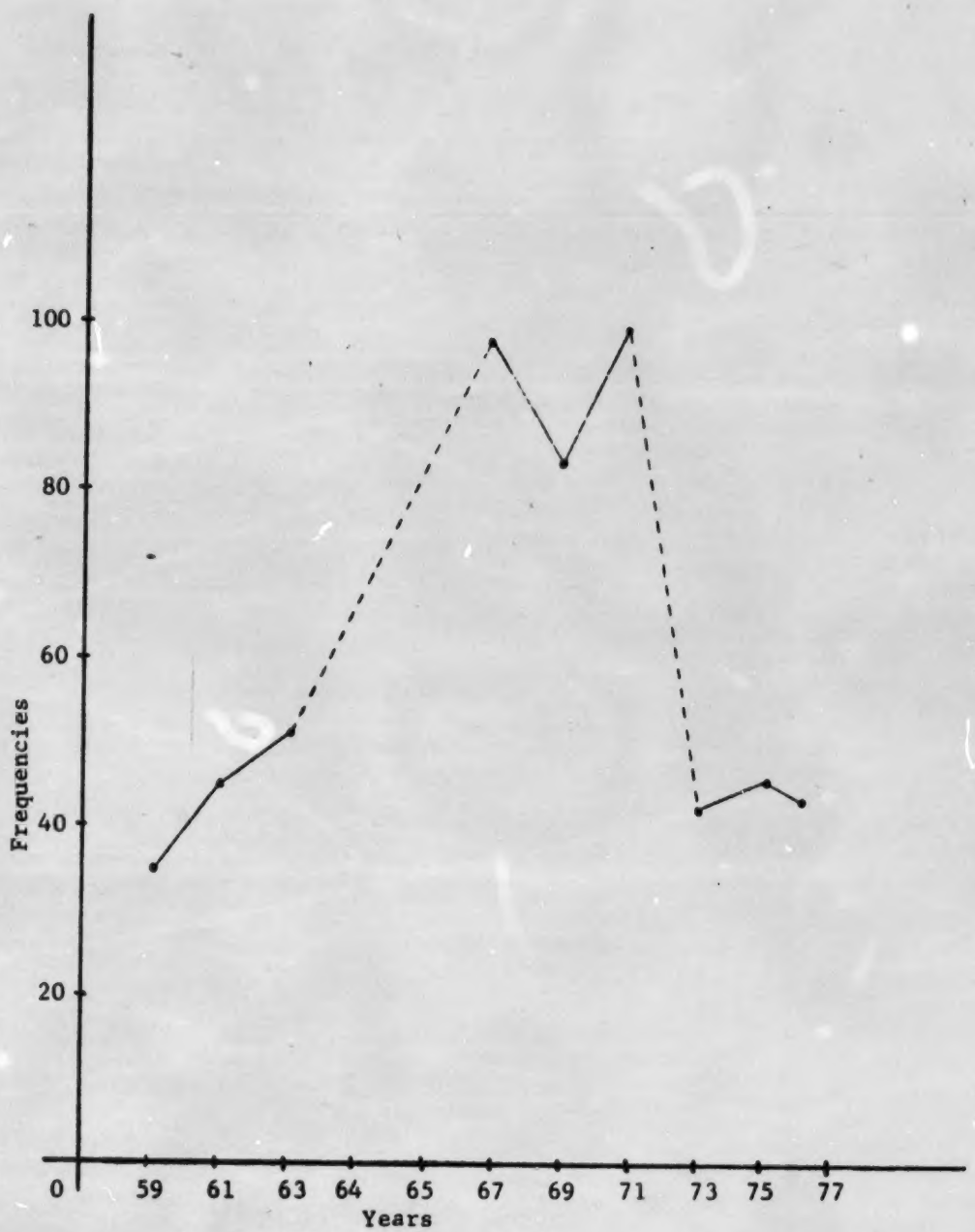

Figure 4. Frequencies of tobacco news articles and editorials from The Wall Street Journal Index.
Key: Dotted line=projected line.

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